

REMARKS

This Amendment is responsive to the Office Action dated January 10, 2007. Applicant has amended claims 1, 4–6, 12, 15–17, 23, 25, and 29–30. Claims 1–7, 12–18, 23–25, 29 and 30 are pending.

Claim Rejection Under 35 U.S.C. § 103

The Office Action rejected claims 1–7, 12–18, 29 and 30 under 35 U.S.C. § 103(a) as being unpatentable over Karlsson (US 5,640,677) in view of Bottomley (US 6,473,602). The Office Action also rejected claims 23–25 under 35 U.S.C. § 103(a) as being unpatentable over Karlsson in view of Choi (US 2003/0224790) and Bottomley. Applicant respectfully traverses the rejections. The applied references fail to teach, suggest, or disclose the inventions defined by Applicant’s claims, and provide no teaching that would have led a person of ordinary skill in the art to arrive at the claimed invention.

The Office Action incorrectly stated that Applicant’s claim 1 requires setting a value indicative of the measured power of the second signal to a negligible value after the selection of the first signal, when the second signal is “more than the threshold value and less than the measured power of the first signal.”¹ Applicant has amended claim 1 for the purpose of clarification. Applicant’s amended claim 1 requires setting a value indicative of the measured power of the second signal to a negligible value when the measured power of the second signal is at least a predetermined margin value lower than the measured power of the first signal. To aid in the Examiner’s understanding, Applicant provides the following observations. Applicant’s amended claim 1 requires taking an action upon satisfaction of a condition. The action is “setting a value indicative of the measured power of the second signal to a negligible value.” The condition is, “when the measured power of the second signal is at least a predetermined margin value lower than the measured power of the first signal.”

The device of Karlsson fails to set a value indicative of the measured power of the second signal to a negligible value for any reason, much less when the measured power of the second signal is at least a predetermined margin value lower than the measured power of the first signal. Instead, the device of Karlsson maintains a candidate list according to, e.g., the signal

¹ Office Action dated Jan. 10, 2007, p. 4 (emphasis added).

strengths of “candidate” cells.² The device of Karlsson records the actual measured signal strength of each of the various cells in the candidate list and compares the signal strengths of the various cells in the candidate list.³ In other words, the device of Karlsson merely measures each signal’s strength, records the actual measured signal strength, and uses the actual measurement of each signal’s strength to compare the signals. Recording the actual measured signal strength for each of the cells in a candidate list is clearly not the same as setting a value indicative of the measured power of a signal to a negligible value. The device of Karlsson fails to teach, suggest, or disclose setting a value indicative of the measured power of the second signal to a negligible value, as required by Applicant’s amended claim 1.

The device of Karlsson also fails to determine when the measured power of the second signal is at least a predetermined margin value lower than the measured power of the first signal as required by Applicant’s amended claim 1. Instead, the device of Karlsson determines whether a signal exceeds a minimum (i.e., lower bound) threshold value in order to perform a handoff.⁴ The device of Karlsson generally performs a handoff from a higher-layer cell (i.e., an “umbrella cell”) to a lower-layer (i.e., a “microcell”) when the signal strength of the lower-layer cell is above a certain threshold.⁵ A handoff from the lower-layer cell to the higher-layer cell may occur when the signal strength of the lower cell falls below the threshold and the higher-layer cell is a better candidate.⁶ However, the device of Karlsson never determines whether the signal strength is more than a predetermined margin below the strength of the higher-layer cell. Therefore, the device of Karlsson fails to teach, suggest, or disclose “setting a value indicative of the measured power of the second signal to a negligible value when the measured power of the second signal is at least a predetermined margin value lower than the measured power of the first signal” as required by Applicant’s amended claim 1.

Insofar as the device of Karlsson fails to set a value indicative of the measured power of the second signal to a negligible value, and the device of Karlsson also fails to determine when the measured power of the second signal is at least a predetermined margin value lower than the measured power of the first signal, Karlsson clearly fails to set a value indicative of the

² Karlsson, col. 13, ln. 41–col. 14, ln. 30; *see also* FIG. 11.

³ Karlsson, col. 13, ln. 41–col. 14, ln. 30; *see also* FIG. 11.

⁴ See, e.g., Karlsson, col. 3, ll. 18–22.

⁵ Karlsson, col. 8, ll. 44–47.

⁶ Karlsson, col. 8, ll. 47–50.

measured power of the second signal to a negligible value when the measured power of the second signal is at least a predetermined margin value lower than the measured power of the first signal as required by Applicant's amended claim 1. That is, the device of Karlsson fails to suggest either of these two elements of Applicant's amended claim 1, much less their operation together.

Neither the Bottomley reference nor the Choi reference overcomes the deficiencies of the device of Karlsson relative to Applicant's claims. In particular, the devices taught by Bottomley and Choi each fail to teach, suggest, or disclose, for example, setting a value indicative of the measured power of the second signal to a negligible value when the measured power of the second signal is at least a predetermined margin value lower than the measured power of the first signal as required by Applicant's amended claim 1. The Office Action merely relied on Bottomley to teach a frequency division multiple access (FDMA)⁷ system and relied on Choi to teach the implementation of a system with a computer-readable medium comprising instructions to cause the system to perform a method.⁸ Applicant does not acquiesce to the Examiner's conclusion that a person of ordinary skill in the art would have had a reason to combine the device of Karlsson with the devices taught by Bottomley or Choi, but even if one had a reason to do so, one still would not have arrived at the requirements of Applicant's claims. In particular, neither Bottomley nor Choi provide any teaching that would remedy the deficiencies of Karlsson relative to Applicant's claims.

Applicant's independent amended claims 12, 23, and 29 each recite features similar to those of Applicant's independent amended claim 1. Therefore, similar arguments apply with respect to claims 12, 23, and 29. The various claims that are dependent upon independent claims 1, 12, 23, and 29, namely claims 2–7, 13–18, 24–25, and 30, inherit the limitations of the respective base claims and are therefore likewise patentable. Moreover, Applicant's dependent claims likewise recite a number of features not taught, suggested, or disclosed by Karlsson even in view of Bottomley or Choi.

For example, Applicant's claim 3 requires that the negligible value is approximately equal to zero. The Office Action cited step 125 of Karlsson, FIG. 11, as teaching this requirement. The disclosure of Karlsson states, "Next, at 125 the system selects the first

⁷ Office Action dated Jan. 10, 2007, p. 4.

⁸ *Id.* at p. 11.

channel for evaluation and clears a candidate channel list.”⁹ Rather than setting a value to approximately equal to zero, as required by Applicant’s claim 3, the device of Karlsson clears the entire candidate channel list. Clearing a list entirely, i.e. removing all entries from the list, is in stark contrast to setting a value indicative of the measured power of the second signal to a negligible value, wherein the negligible value is approximately equal to zero. Moreover, as discussed above, the device of Karlsson only records the measured signal strength. The device of Karlsson never sets a value indicative of the measured power of the second signal to any sort of negligible value, especially not a negligible value that is approximately equal to zero. The device of Karlsson therefore fails to set a value indicative of the measured power of the second signal to a negligible value, wherein the negligible value is approximately equal to zero. Claim 14 recites similar requirements to those of claim 3, and is distinguishable from Karlsson for similar reasons to those above.

As discussed above, the device of Karlsson fails to teach or suggest a predetermined margin value lower than the measured value of a signal strength. Therefore the device of Karlsson necessarily fails to teach, suggest, or disclose that the predetermined margin value is in the range of 10 to 20 decibels, as required by Applicant’s claim 4, or is approximately 15 decibels, as required by Applicant’s claim 5. The Office Action even recognized that the disclosure of Karlsson does not disclose specific values or ranges of values for a threshold.¹⁰ The Office Action asserted that it would have been obvious to configure the device according to system requirements. However, the Office Action does not state how one skilled in the art would have determined what “system requirements” would be appropriate. On the other hand, Applicant’s specification states that “cells immediately adjacent that first cell typically exhibit a signal approximately 16 decibels below that of the first cell, even if no signal is actually present in the adjacent cells.”¹¹ Applicant respectfully submits that a choice of a range of 10 to 20 decibels, or approximately 15 decibels, for the predetermined margin value would not be obvious in light of Karlsson, even in view of Bottomley or Choi, as this combination of references fails to provide one skilled in the art with any reason to select such values for the predetermined margin value. For this additional reason, Applicant respectfully disagrees with the Office Action’s

⁹ Karlsson col. 13, ll. 48–50.

¹⁰ See, e.g., Office Action dated Jan. 10, 2007, at pp. 5–6.

¹¹ Applicant’s specification, ¶ [0037].

conclusion of obviousness with respect to claim 4. Claims 15, 25, and 30 recite similar requirements to those of claim 4. Claim 16 recites similar requirements to those of claim 5.

Likewise, as discussed above, the device of Karlsson fails to set a value indicative of the measured power of the second signal to a negligible value when the measured power of the second signal is at least a predetermined margin value lower than the measured power of the first signal as required by Applicant's amended claim 1. Therefore, the device of Karlsson necessarily fails to set a value indicative of a measured power of a given one of the signals associated with a given cell to a negligible value when the measured power of the given signal is at least a predetermined margin value lower than a measured power of another one of the signals associated with an adjacent cell to the given cell as required by Applicant's amended claim 6.

Claim 17 comprises similar requirements for which similar arguments apply.

For at least the reasons set forth above, the Office Action has failed to establish a prima facie case for non-patentability of Applicant's claims 1-7, 12-18, 23-25, 29 and 30 under 35 U.S.C. § 103(a). Applicant respectfully requests withdrawal of all pending rejections and allowance of all pending claims.

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 17-0026. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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